TIPS on Personnel Management for SUPERVISORS

from the Director of Personnel Carl B. Barnes

U.S. Department of Agriculture · Washington 25, D.C.

NOVEMBER 7, 1962

NOTE TO SUPERVISORS:

Recent events have made us all aware that we are somewhat lacking in knowledge about precautionary measures we might take in the event of a national emergency. This holds true for both the home and the office.

Secretary Freeman has expressed his concern that our employees be as fully informed as anyone can be about their own safety and that of their families under any emergency situation. We all pray that such a situation never arises. But I am a firm believer in "an ounce of prevention is worth a pound of cure."

For this reason, we have just completed a series of meetings for employees in the Washington, D.C. Area to take steps to remedy this situation. Dr. Frank A. Todd, Emergency Programs Staff, has coordinated these meetings.

The material in this "Tips" Sheet to Supervisors is a summary of the remarks of Dr. Todd and his associates from other USDA Agencies who cooperated in this effort. It was felt that all field employees should have the benefit of this information as well as those of us in Washington.

Will you please see that the information contained in this "Tips" Sheet is brought to the attention of every employee under your supervision?

Thank you.

Carl B. Barnes
Carl B. Barnes
Director of Personnel

fig. 1

All of us hope that a nuclear attack never occurs. But in these days of international tension one of the things we must face squarely is that it could happen. We need to be prepared to take fast, calm action. As Carl Barnes' note says, "An ounce of prevention is worth a pound of cure."

Certainly, in the event of an attack we will not have time then to learn about precautionary measures. This issue of "Tips" is prepared to help us learn what to do and what equipment or material might be needed.

THE EXPLOSION

A nuclear explosion produces a fireball in which the heat is intense – nearly that of the interior of the sun (Figure 1). This heat causes the surrounding air to expand and create a strong outward blast wave. At the same time the bomb fuel, bomb casing and other weapon parts vaporize and immediately become radioactive or capable of emitting alpha, beta and neutron particles and gamma rays. After a short time the fireball begins to cool and starts rising. As the cooling air rushes in to fill the vacuum it may lift tons of debris into the mushroom shaped nuclear cloud. The heat liquefies the debris and it becomes mixed with the radioactive products. As the fireball cools the debris solidifies and becomes permeated with radioactive material. This radioactive debris constitutes fallout. When the cloud cools and stops rising, fallout begins its descent to earth. It is usually 30 to 45 minutes before the first fallout reaches the ground. Fallout is dustlike in character and causes surface contamination which remains and emits radiation long after the blast and heat have dissipated. The fallout pattern (Figure 2) may be irregular and varied in intensity depending largely on wind direction and land surface.

DISTRIBUTION OF ENERGY

A nuclear explosion produces tremendous energy which is equivalent to thousands or millions of tons of TNT. The energy thus produced is distributed in various ways (Figure 3). Fifty percent is dissipated as blast which compresses the air outward from the center of the explosion. Thirty-five percent is dissipated as thermal energy in the form of heat and light. Five percent of the energy is initial radiation which is dissipated within one minute following the detonation. It differs

Fallout

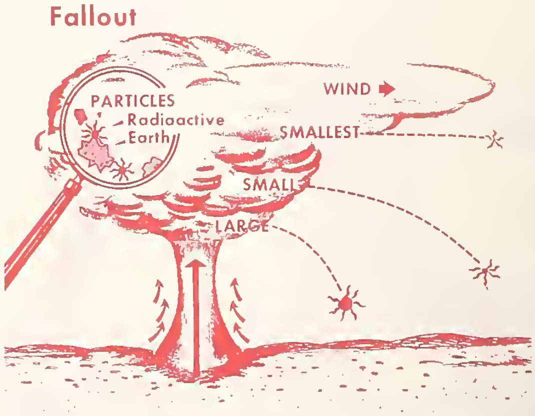


fig. 2

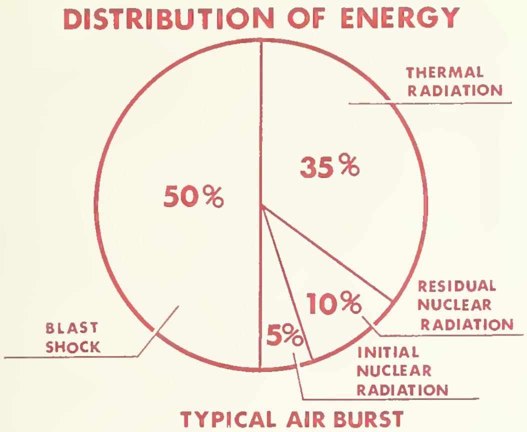


fig. 3

from fallout in that it contains neutrons and can make other material radioactive. The initial radiation is limited in area to approximately the same region that is heavily damaged from blast and thus does not present a fallout problem. The remaining 10 percent of energy is dissipated through residual radiation which is the radiation fallout we are concerned about.

BLAST AND THERMAL EFFECTS

The effect of a nuclear blast depends on several factors including bomb size and design, distance from point of explosion, the height of the burst and ground terrain. Blast effect can range from slight damage to complete destruction in the area surrounding the explosion. One of man's greatest problems at the time of the explosion is to protect himself from flying particles such as rocks, glass or wood.

The brilliant flash of a nuclear explosion warns that a blast wave will arrive within from 10 seconds to 10 minutes. The blast moves at the speed of sound while thermal energy moves at the speed of light and arrives almost instantly. Thermal energy may cause fires, burns to exposed skin, and severe eye damage, perhaps even blindness. Heat, like light, moves in a straight line and anything that casts a shadow affords protection against it. Precautions should be taken against fire by disposing of stored inflammable materials such as gasoline, paint or loose paper. If attack is eminent the gas and electric services should also be turned off.

FALLOUT RADIATION

Radiation presents two distinct hazards. Gamma rays from fallout are the major source of external injury. These rays are similar to X rays, travel long distances, and may penetrate deeply into or go through the body or other substances. Beta rays present the other hazard. These particles travel short distances, cannot penetrate undamaged skin, and even clothing affords protection from this type of radiation. Beta particles are damaging, however, if introduced into the body. For this reason heavily contaminated food and water should not be consumed.

Fallout radiation can penetrate living tissue and can change, damage, or destroy living cells. Reaction to exposure varies from little or no apparent damage to death, depending on the amount of radiation received and the number and kind of cells affected.

Nuclear radiation is measured in terms of roentgens. Since a total dose of 200 roentgens over a short period of time would make most people ill and a dose of 450 roentgens will result in many deaths, it is apparent that avoidance of high intensity radiation is imperative.

It is easier to protect against fallout radiation than against other types. While we cannot destroy fallout or hasten its decay we can often remove the fallout, move from the area where fallout is present or place barriers between ourselves and radioactive material. Radiation – like light – travels in all directions from its source. The radiation hazard ends when the fallout source is removed because radiation from fallout does not make other material radioactive.

PROTECTION FROM RADIATION

Protection against radiation is afforded by three factors – distance, shielding and time. Distance is probably the best form of protection because radiation spreads from its source and, like light, becomes less intense the further it travels. Two hundred feet of air will absorb about one-half the gamma radiation from nuclear fallout.

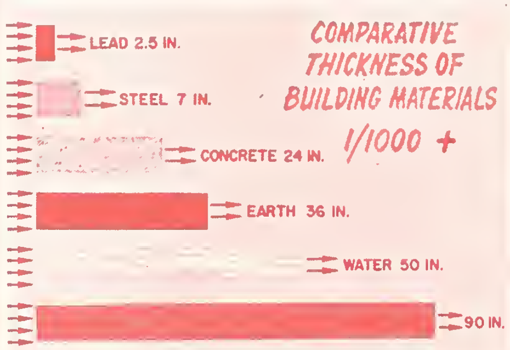
Time also affords protection because the intensity of fallout decreases rapidly at first and then more slowly as time passes (Figure 4). For every sevenfold increase in time following the explosion the radiation intensity is reduced by a factor of 10. For example, if one hour after detonation, radiation intensity is 1000 roentgens per hour, the intensity of radiation 7 hours later would be about 100 roentgens per hour. A further sevenfold increase in time, (7 x 7 or 49 hours) would reduce the intensity to about 10 roentgens per hour. At the end of two weeks the intensity would be approximately one roentgen per hour.

Shielding provides the third method of protection against radiation. Any shelter at all is valuable in shielding ourselves from radiation since the aim is to place as much material between oneself and the radiation source as possible. Some

Time - Decay

TIME (hr.)	DECAY	RADIATION INTENSITY
1	—	1,000 r/hr
7	1/10	100 r/hr
7X7 = 49 (2 days)	1/100	10 r/hr
7X7X7 = 343 (2 wks)	1/1,000	1 r/hr

fig. 4



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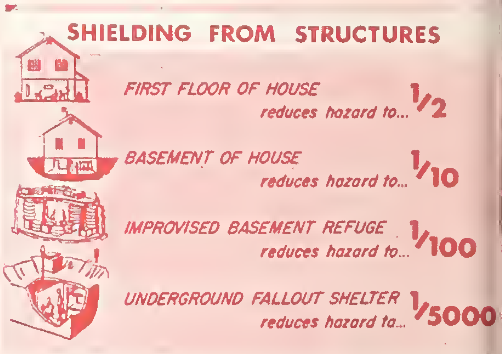


fig. 6

materials, however, afford greater shielding than others (Figure 5) and this should be considered in building or selecting a shelter area. In an emergency the shelter may be in the basement, the central part of a house in a windowless area, or in a clothes closet (Figure 6). The best shield from radiation might be a constructed shelter or a basement. If the basement contains windows added protection could be obtained by shielding the window openings with dirt or sand. It is most important to use the shelter the first 48 to 72 hours following the bomb explosion. Provision should be made for at least two weeks occupancy to allow for radioactive decay.

A building covering a large area affords more protection than the same height building covering a smaller area (Figure 7). This is because the larger building will enable the occupants in the center of the building to keep farther away from the surrounding fallout. Similarly, a multi-storied building would provide more protection than a 2- or 3-story building (Figure 8).

Home shelters should be provided with a two week supply of food and water for each potential occupant (Figure 9). This would include at least seven gallons of water per person, battery radio and extra batteries, a self contained lighting system with extra batteries, first aid kit and sanitary facilities. These provisions may have to be rationed according to circumstances, and in case of extended emergency additional water might be obtained from undamaged water heaters and toilet tanks. With a little forewarning the bathtub or other containers could be filled.

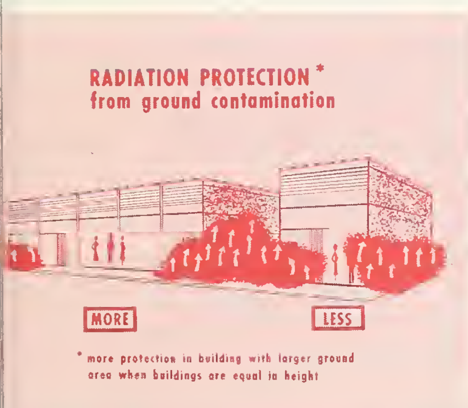
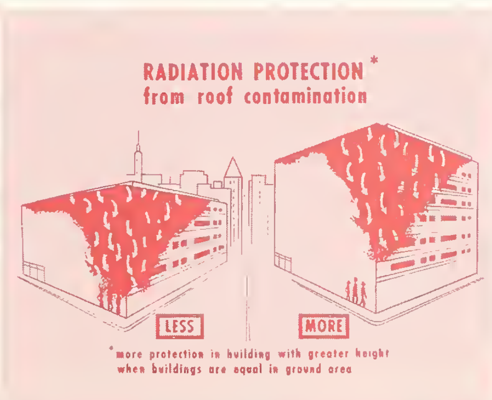


fig. 7



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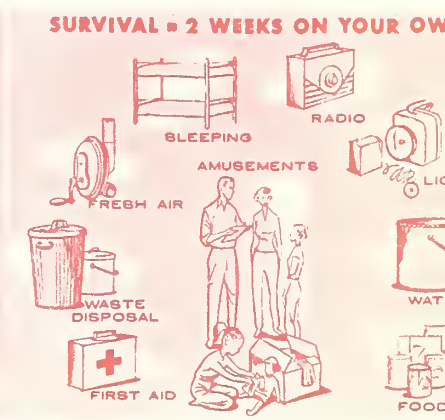

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DECONTAMINATION

Since fallout radiation is extremely dangerous and cannot be detected through the senses (sight, hearing, smell, taste or touch) we must be extremely careful after a nuclear explosion. Radioactivity cannot be destroyed or neutralized. However, we can remove the contaminating fallout material. This is the principle of decontamination. Fresh fallout is dustlike and normally only surface contamination results. Our problem is to prevent the fallout from being mixed into the food and water supply. Tightly sealed cellophane or cardboard packages, protective bags, cans or jars cannot be

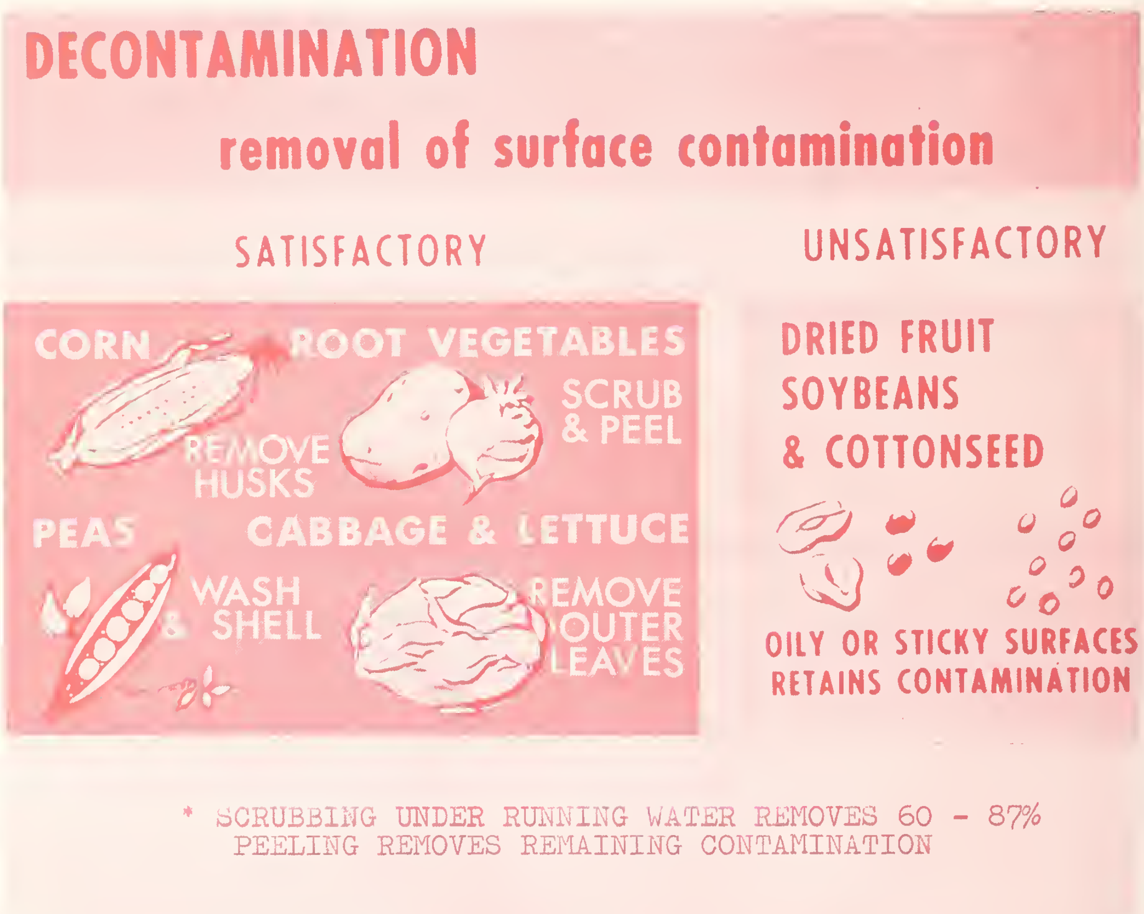

fig.10

penetrated by fallout. Thus if the radioactive material can be washed off, brushed off or rinsed off the contents would be safe for use under emergency conditions (Figures 10, 11). Raw vegetables may be peeled and washed and meat may be trimmed to eliminate most of the contamination. Under these emergency conditions we can afford to consume a small amount of radioactive material in order to exist until the emergency is over.

Although government units would be striving to assist the individual during the time of disaster, the continued application of precautionary measures remain the responsibility of the individual.

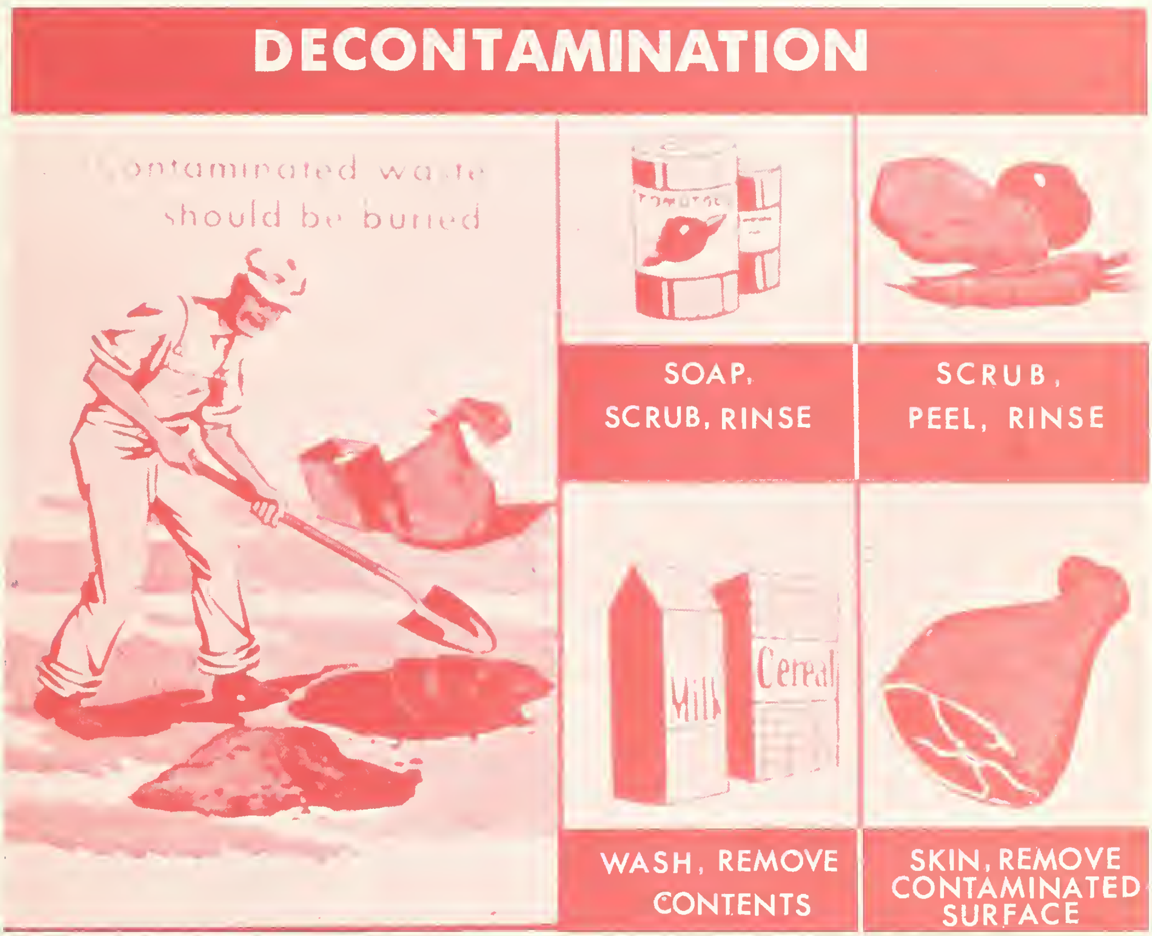

fig. 11

This issue of "Tips," as noted by Carl Barnes, is a summary of the material and demonstrations presented by the following men to whom we are all indebted.

Dr. Frank Todd, Assistant to the Administrator
Emergency Programs, Agricultural Research Service

Dr. Robert Moody, Supervisory Veterinary
Meat Inspector, Agricultural Research Service

Dr. James Lane, Head
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Agricultural Research Service

Mr. William Morton, Electronics Engineer
Beltsville Radio Laboratory, Forest Service

Growth Through Agricultural Progress

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HOW TO JUDGE EMPLOYEE PERFORMANCE

Many articles and books have been written on employee appraisal. Most of them are good – some are excellent. If we were to read them all, we would have little time left over to do any supervising.

Employee appraisal – that is the technical term for judging an employee's job performance – takes place every day.

Good employee appraisal is a highly essential part of the management function. The real payoff of good appraisal is the response, the morale, and the productivity that is stimulated.

NOTE TO SUPERVISORS:

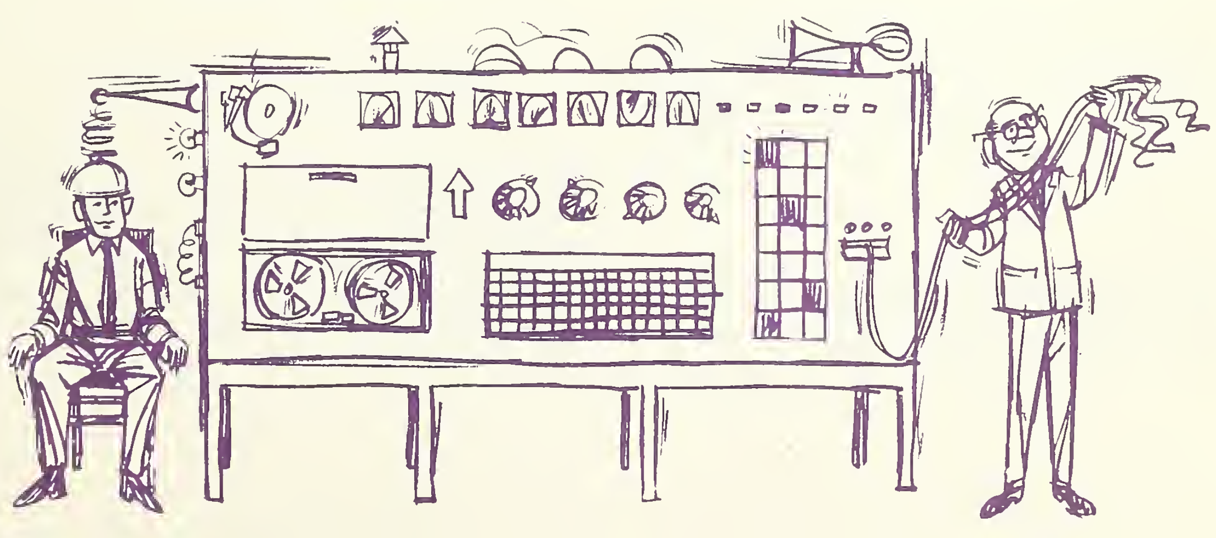
All of us who have supervisory responsibility are faced with the problem of employee appraisal. There are forms which must be completed, squares to be marked, narrative statements to be prepared, and many other devices which we are called upon to perform in judging the work performance of our subordinates.

This job of evaluation, I am sure we will all agree, is a tough one to do, and probably we all have ideas as to how the procedure could be improved.

This issue of "Tips" may help us to re-group our thoughts and take a fresh look at the difficult task of employee appraisal.

Carl B Barnes

Carl B. Barnes
Director of Personnel



We all know that employee appraisal is not an exact science. It couldn't be because human factors are involved. There is no magic formula which will insure uniformity.

There is no exact science for employee appraisal

We have all heard the complaint: "I'm rated unfairly." Employees have said that appraisals are based on friendship rather than on performance; that appraisals are made by supervisors having no direct knowledge of an employee's performance; that once a poor appraisal becomes a matter of record, it is forever held against the employee.

In general, a good job is being done on appraisals throughout the Department. However, a good job can always be done better, and in the opinion of some employees, there's room for improvement.

The following ideas are composite of many good suggestions presented by a number of authors and experts in management. They should be useful for all of us in improving our ability and objectivity in appraising the work of our subordinates.

IT'S THE TOTAL RECORD THAT COUNTS

A few years ago General Eisenhower, then President of the United States, entertained his old wartime comrade, General Montgomery, at his home in Gettysburg, Pennsylvania. They toured the famous Civil War battlefield nearby and discussed the strategy of the opposing commanders, Generals Lee and Meade.

Commenting on the number of mistakes both had made in that fierce three-day conflict, the tart-tongued Monty snapped, "I would have sacked them both."

"Perhaps on the basis of that battle alone," replied Eisenhower, "such a decision would have been justified. But Meade was fighting in unfamiliar country and had just become commanding general. Lee was served by recently promoted and inexperienced subordinates. However, when you judge anyone you have to take their total performance into consideration."

General Eisenhower's reply provides the key to effective appraisal. Certainly no one; executive, supervisor, or employee, would like to have his job performance judged when he is having an off day. Nor would any intelligent supervisor appraise a subordinate on the basis of only one assignment he had done particularly well. The total record provides the measure of an employee's reliability, initiative, special skills, resourcefulness, and capability of working under the pressure of emergency. Yet too many supervisors make the mistake of letting their random impressions of an employee influence their judgment of his ability.

THE DANGER OF TYPE-CASTING

All of us are apt to catalogue people. Have you ever made remarks like: "John is impulsive and likely to go off half cocked." "Bill is dependable but lacks initiative." John may have done something once that indicated impulsiveness, but maybe he has matured. Bill may have shown lack of initiative on a certain occasion, because he was inexperienced or the job was strange to him. There is a chance that in the

meantime he has acquired greater confidence in himself. But you won't know if you imprison either man in a category.

Type-casting is a natural tendency, but we should guard against it. Our ability to develop subordinates lies in our willingness to work with them every day so that we can judge their work accurately, and at the same time be sure that our judgment is up-to-date. *A supervisor can make no greater leadership error than to let yesterday's judgments influence today's decisions about people.*

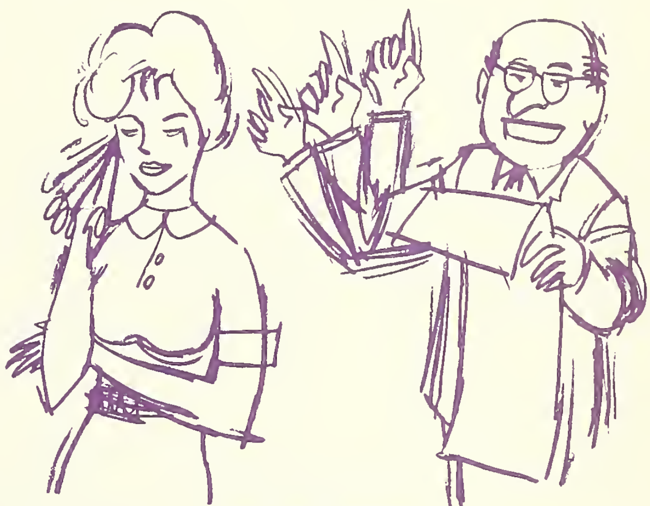
It is equally true that if an employee realizes that his boss has evaluated him in the balance and found him wanting in certain qualities or skills—and believes that this judgment is fixed and unalterable—he will have little incentive to try to improve himself.

A famous philosopher once said, "The power of a Caesar or an Alexander rested upon the fact that they had a liking for differences and did not expect pear trees to produce plums."

All people are different. The employee whose performance you judge may not go about his job the way you do. *Go by results!* If he gets the work done and it measures up to your standards, don't allow his personality traits, his individual approach to the job, or other superficial factors to influence your judgment negatively. Appraise on the quality of his work as a whole—and work with him to improve those parts of it in which he is deficient.

Don't save up your criticisms.

The good leader gets finger-tip control from his intimate knowledge of his people. If you tell employees when they have done well, when they have missed the boat—and do it in a natural way when it happens—they won't resent criticisms. However, if you hoard your fault-finding and lump it all together in a single, grueling session held once or twice a year, you make it hard for yourself and the worker.



Don't store up criticism

SUPERVISORY GUIDELINES IN JUDGING EMPLOYEE JOB PERFORMANCE

Since there is no substitute for managerial judgment, here are some suggestions that may help us when appraising employee job performance during the competitive years ahead:

Emphasize the strong points.

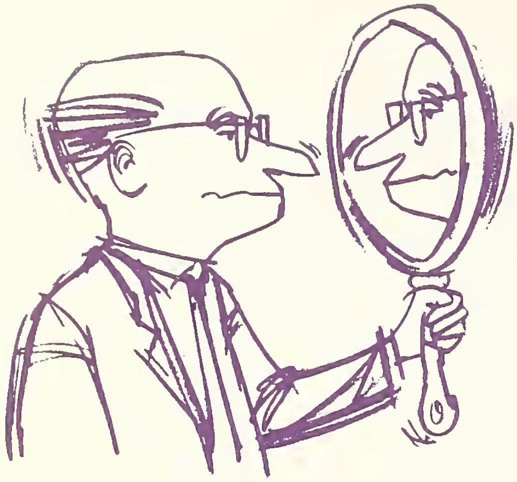
The skillful leader plays to the strengths of his subordinates. It's better for a worker to develop his special talents and skills than it is to spend his entire time trying to correct weaknesses. Point out a worker's deficiencies and help him try to minimize them, but keep things in balance. If you concentrate entirely on the negative, you will accomplish little in developing the positive.

Comment on improvements.

If an employee corrects a shortcoming which you have criticized, let him know you have observed his improvement. That's how you encourage him. He knows you don't hold past mistakes against him, that you are quick to revise opinions when they are no longer applicable.

Don't be a debater.

You are the final judge of an employee's job performance. This doesn't mean you should cut off all discussions. Let him give his point of view, and if he's right, say so. But don't let the discussion turn into an argument.



Be self-critical

Be self-critical.

Before you put an employee on the mat for a subpar job, ask yourself frankly, "Has my leadership contributed in any way to his deficiency?" And such questions as: "Did he understand my order?" "Did he have *proper training* to do the job?" "Did I expect too much?" "Is my criticism absolutely fair and not influenced by bias?" Honestly answered, these will help give you objectivity. Objectivity enables you to discuss the employee's mistakes in a constructive way. *Your* willingness to *accept accountability* for mistakes will make the worker more willing to shoulder his own responsibility. *Only dictators can't afford to confess they're wrong.*

Don't rely on gimmicks.

The best appraisal plan yet developed won't relieve you of your responsibility for making decisions about an employee's job competence. The best way to judge it is to work with him day by day – to observe him during moments of routine, during moments of stress, and in a variety of assignments.

Make sure the employee has the same understanding of his job that you do.

Otherwise you can't judge an employee's job performance fairly. When you talk things over with an employee, let him do some of the talking. You may find he never realized that he was in any way accountable for certain parts of his work which you claim he is neglecting.

Don't try to leave them laughing.

The notion, "Start with praise, follow it up with criticism, and break off the interview with another compliment," is all right in theory, but it doesn't always work. The final compliment may make the worker forget about the criticism. Besides, you're trying to develop mature, responsible employees. An adult is supposed to be able to take deserved criticism. When an employee requires criticism for poor performance, give it to him – straight from the shoulder. When he merits praise, see that he gets it. But don't try to mix the two together. They may cancel each other out, and you get nowhere.

There is no appraisal system yet devised that is foolproof. The soundness of your judgment regarding an employee's ability is still the key to successful appraisal.

When he merits praise, see that he gets it

Don't compare.

Comparisons are odious. This is especially true in discussing job performance. An employee may be willing to take your criticism of his deficiencies, but if you point to another employee as an example he should follow, he resents it.

Get down to cases.

Vague generalities don't get you anything at the bank. Be specific. Explain in clear-cut, one-two-three language where the employee is falling short, what he can do to correct his mistakes. Make sure he understands precisely what standards you expect him to meet.

Criticize the work, not the man.

Try to avoid personalities when discussing an employee's job performance. There are certain exceptions to this advice: for example, if the attitude of an employee is affecting his job competence. But in general confine your remarks to the job itself.

Don't laugh it off.

Some supervisors make the mistake of trying to hide their criticism behind humor. While many a truth is spoken in jest, sarcasm and irony usually don't work. Nobody likes to be the goat, even if he deserves the horns. An employee's competence at his job is deadly serious to him — to you. His future is at stake, and your job is to build a competent employee team.

There is nothing confidential about these ideas — you may discuss them with anyone you wish.

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